

Application No.:

10/603,040

MAT-8426US

Amendment Dated:

January 9, 2006

Reply to Office Action of:

September 7, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

9. 1. (Currently Amended) A plasma display apparatus including:

(A) a panel section including:

(A-1) a first board having a plurality of scanning electrodes and sustain electrodes in pairs; and

(A-2) a second board having data electrodes which cross the scanning electrodes and the sustain electrodes, and faced the first board; and

(B) a driver for outputting a driving voltage for driving the panel section,

the plasma display apparatus comprising:

(a) a sustaining period when a sustaining pulse is alternately applied to the scanning electrodes and the sustain electrodes for keeping discharge; and

(b) an erasing period when a ramp voltage pulse whose polarity differs from polarity of the sustaining pulse is applied to one of said scanning or sustain electrodes an electrode, which differs from an electrode_another of said scanning or sustain electrodes where a last pulse of the sustaining pulse is applied.

10. 2. (Original) The plasma display apparatus of claim 9,

wherein the last pulse of the sustaining pulse is positive, and

a minimum voltage Vnr of the ramp voltage pulse, which is applied in the erasing period, has a following relation for a discharge-starting voltage Vf1 between an electrode where the ramp voltage pulse is applied and one of the data electrodes.

$$-(Vf1 - 60) \leq Vnr \leq -30 \quad (\text{V of units})$$

3. (Original) A plasma display apparatus including:

(A) a panel section including:

(A-1) a first board having a plurality of scanning electrodes and sustain electrodes in pairs; and

(A-2) a second board having data electrodes which cross the scanning electrodes and the sustain electrodes, and faced the first board; and

(B) a driver for outputting a driving voltage for driving the panel section,

the plasma display apparatus comprising:

a sustaining period when a sustaining pulse is alternately applied to the scanning electrodes and the sustain electrodes for keeping discharge,

wherein a voltage V_{sh} of a last pulse of the sustaining pulse has a following relation for a voltage V_{st} of the sustaining pulse before the last pulse and a discharge-starting voltage V_{f2} between one of the scanning electrodes and one of the sustain electrodes.

$$V_{st} \leq V_{sh} < V_{f2}$$

2. (Original) The plasma display apparatus of claim 3,

wherein the voltage V_{sh} of the last pulse of the sustaining pulse has a following relation for the discharge-starting voltage V_{f2} between the scanning electrode and the sustain electrode.

$$(V_{f2} - 50) \leq V_{sh} < (V_{f2} - 30) \quad (\text{V of units})$$

5. (Original) A plasma display apparatus including:

(A) a panel section including:

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(A-1) a first board having a plurality of scanning electrodes and sustain electrodes in pairs; and

(A-2) a second board having data electrodes which cross the scanning electrodes and the sustain electrodes, and faced the first board; and

(B) a driver for outputting a driving voltage for driving the panel section,

the plasma display apparatus comprising:

a sustaining period when a sustaining pulse is alternately applied to the scanning electrodes and the sustain electrodes for keeping discharge,

wherein a pulse width ts_2 of a last pulse of the sustaining pulse is wider than a pulse width ts_1 of the sustaining pulse before the last pulse.

6. (Original) The plasma display apparatus of claim 5,

wherein the pulse width ts_2 of the last pulse of the sustaining pulse has a following relation for the pulse width ts_1 of the sustaining pulse before the last pulse.

$$(ts_1 + 2) \leq ts_2 \leq 20 \quad (\mu\text{s of units})$$

3. (Original) The plasma display apparatus of claim ~~3~~ further comprising:

an erasing period after the sustaining period,

wherein the erasing period is a period when a ramp voltage pulse whose polarity differs from polarity of the last pulse of the sustaining pulse in the sustaining period is applied to an electrode, which differs from an electrode where the last pulse of the sustaining pulse is applied.

7 ~~8.~~ (Original) The plasma display apparatus of claim 5 further comprising:

an erasing period after the sustaining period,

wherein the erasing period is a period when a ramp voltage pulse whose polarity differs from polarity of the last pulse of the sustaining pulse in the sustaining period is

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applied to an electrode, which differs from an electrode where the last pulse of the sustaining pulse is applied.

11. (Original) The plasma display apparatus of claim 1,⁹

wherein a slope of the ramp voltage pulse in the erasing period ranges from 0.5 V/ μ s to 20 V/ μ s.

12. (Original) The plasma display apparatus of claim 3 further comprising:

an erasing period when a ramp voltage pulse whose polarity differs from polarity of the sustaining pulse is applied to an electrode, which differs from an electrode where the last pulse of the sustaining pulse is applied,

wherein a slope of the ramp voltage pulse in the erasing period ranges from 0.5 V/ μ s to 20 V/ μ s.

13. (Original) The plasma display apparatus of claim 5 further comprising:

an erasing period when a ramp voltage pulse whose polarity differs from polarity of the sustaining pulse is applied to an electrode, which differs from an electrode where the last pulse of the sustaining pulse is applied,

wherein a slope of the ramp voltage pulse in the erasing period ranges from 0.5 V/ μ s to 20 V/ μ s.